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CIM IG-4
11/06

Instruction Guide APPLICATION OF CIM TO WOOD

1.0 DESCRIPTION

This guide covers the installation of a black CIM Coating System over a sound, properly prepared wood base. The system shall consist of a minimum of 60 wet mils (see product Coating Profile for appropriate coverage chart) applied by spray, squeegee, roller, or trowel. Actual coverage rates may differ from theoretical rates depending on surface profile and application method.

2.0 MATERIALS

2.1 Black CIM Premix and Activator

2.2 Optional Materials

2.2a. CIM 61BG Epoxy Primer

2.2b. CIM Bonding Agent

2.2c. CIM Scrim

2.2d. CIM 1000 Trowel Grade Premix & Activator

3.0 SAFE PRACTICES

Use equipment and procedures designed to minimize danger to personnel and materials. Special attention should be made to provide adequate ventilation and respirators for personnel applying black CIM systems in confined spaces or when operating spray equipment. See C.I.M. Industries' Instruction Guide, "Applying CIM Within Confined Spaces" (IG-9) for more detailed information.

4.0 SURFACE PREPARATION

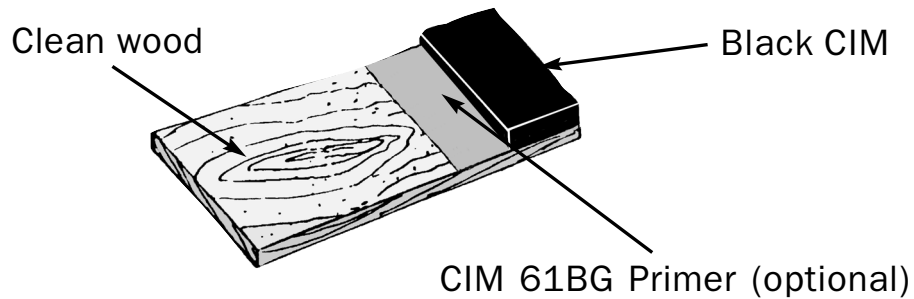
All areas adjacent to those being coated with black CIM which are not intended to be coated should be protected with suitable temporary splash covers such as polyethylene, carpenters paper, or masking tape. Black CIM shall be applied on a clean, dry, structurally sound base.¹ For best results, apply CIM 61BG Epoxy Primer and black CIM when wood is declining in temperature (usually late afternoon). CIM 61BG Epoxy Primer may be used to minimize outgassing.²

WOOD SHOULD NOT BE COATED WHILE IN DIRECT SUNLIGHT! Wood should be coated only while in a temperature declining mode. CIM, because it is black, is a solar absorber and can increase the surface temperature. This, in turn, heats up the air trapped within the wood's pores. The air expands and tries to push its way out of the wood, creating hundreds of bubbles, otherwise known as outgassing. Therefore, if wood is coated in direct sunlight (e.g. a temperature rising mode), outgassing may occur.

Notes:

¹If surfaces are not completely clean, black CIM will achieve poor adhesion to the wood base and may experience blistering and possible failure.

²CIM 61BG Epoxy Primer shall be applied at a minimum rate of 5 wet mils. CIM 61BG Epoxy Primer recoat window shall be no more than 48 hours. Please see CIM 61BG Epoxy Primer Coating Profile for additional information.



NOTES:**4.1 Wood**

Wood surfaces shall be clean and must have a moisture content below 20% based on oven dry weight. Oil or grease spots shall be thoroughly cleaned. If paint or previous coatings have been applied, the surface shall be lightly sanded. All paint or previous coatings that are loose or flaking shall be removed and weathered surfaces sanded down to sound wood. Adhesion tests should be performed on any existing coatings to insure that the black CIM system can achieve a good bond to the substrate.

Black CIM systems shall not be applied over preservative-treated wood unless specific tests for adhesion have been carried out by the owner and the results have been satisfactory. Consult with C.I.M. Industries Technical Personnel for special preparation of certain tropical woods.

4.2 Joints in the Substrate

On large plywood surfaces, the spaces between plywood sheets should utilize CIM Scrim. Apply a 10–20 mil tack coat 3” on each side of the joint. Place CIM Scrim into the tack coat, and then coat scrim with 60 mils of black CIM using a roller. Allow scrim to dry for 1–2 hours before coating the entire system. Using CIM Scrim minimizes the amount of black CIM product that drips between the plywood sheets and helps insure proper coverage.

5.0 APPLICATION**5.1 Penetrations**

Penetrations must be coated with CIM 1000 Trowel Grade at all horizontal to vertical transitions. CIM 1000 Trowel Grade should be applied at least 60 wet mils thick, 2” onto and 2” beyond the penetration. Please see section 5.7 for application procedures for multiple coats. If work stoppage is unavoidable see sections 5.8 and 5.9.

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Black CIM coatings will adhere to most clean construction materials. When coating substrates other than wood, please see the C.I.M. Industries' specific substrate Instruction Guide for detailed information and application procedures.

5.2 Sharp Edges

CIM 1000 Trowel Grade may be used on sharp edges to prevent thin spots from occurring. The entire area should be coated with the specified thickness of black CIM coating within four (4) hours after troweling sharp edges. Please see section 5.7 for application procedures for multiple coats. If work stoppage is unavoidable see sections 5.8 and 5.9.

5.3 Using CIM Scrim

CIM Scrim may also be used on sharp edges to prevent thin spots from occurring. After substrate is properly prepared, apply a thin tack coat, 10–20 mils, of black CIM product. Push scrim evenly into tack coat and allow to cure for 1–4 hours. Apply a 60 wet mil coating of self leveling black CIM directly over scrim. CIM Scrim acts as a coverage gauge to insure thickness.

5.4 Cant Strips

Cant strips should be made with CIM 1000 Trowel Grade wherever horizontal surfaces meet vertical walls. This is crucial in applications such as tanks which experience wall movement when filled, and where wood shifts due to expansion and contraction. Cant strips are generally $\frac{1}{2}$ " or more wide by $\frac{1}{2}$ " or more tall. Allow the cant to cure for a minimum of 12 hours at 70°F. Contact C.I.M. Industries Inc. for specific design details.

5.5 Horizontal Surfaces

Black CIM coatings should be applied to wood at a film thickness of 60 wet mils, depending on application type. This can be achieved in a single coat on horizontal surfaces.

5.6 Vertical and Sloped Surfaces

Black CIM coatings can be applied to a vertical or sloped surface with a roller, brush or spray equipment. Small walls are often coated with rollers or brushes. Large walls should be sprayed using an air assisted airless spray system or plural component spray system. See C.I.M.

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Industries' Instruction Guide, "Spray Application of CIM" (IG-12) or contact C.I.M. Industries for suggested equipment configuration. When working with black CIM products, vertical or sloped surfaces require a minimum of two (2) applications of approximately 30 mils each to obtain the required thickness. If a coating thickness of more than approximately 60–65 mils is specified on a vertical or sloped surface, additional coats will be required to achieve desired thickness.

5.7 Multiple Coats

Second/multiple coats can be applied as soon as the previous coat can be touched lightly without coming off on your finger. For black CIM products at 70°F, the tack free time is typically one (1) hour but no longer than four (4) hours after the previous coat has been applied. Higher temperatures speed up the curing time, and tack free time, therefore significantly shortening the 1–4 hour recoat window. Colder temperatures have the opposite effect. As soon as the coating becomes tack free, the second coat should be applied. For immersion or traffic service, apply all coats within the recoat window except at joint lines.

If it is necessary to walk on the first coat of black CIM in order to apply multiple coats, such as when coating a parking or pedestrian deck, polyethylene boots may be worn to prevent sticking to the coating.

5.8 Recoating After the Recoat Window

If second/multiple coats cannot be applied within the recoat window (1–4 hours under standard conditions), the previous coat must be abraded. Abrading shall be performed by surface grinder or other mechanical means. The black CIM must be solvent wiped (MEK or xylene) to clean up any loose debris. After the solvent flashes off, a light mist of CIM Bonding Agent must be applied. Allow the CIM Bonding Agent to flash off and recoat within one (1) hour. For immersion or traffic service, minimize areas to be recoated outside the recoat window. Severely abrade the areas to be recoated and test recoated areas for acceptable adhesion. Acceptable adhesion may only be achieved through aggressive abrading.

5.9 Overlap at Joints

Should rain or other conditions require work stoppage, prepare for joint lines. Joint lines shall be clean and straight. The overlap shall be a

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minimum of 6” to insure an impervious joint. All areas to be coated where more than a four (4) hour cure has taken place shall be treated per section 5.8, “Recoating After the Recoat Window.”

6.0 TOPPINGS

The black CIM system may include toppings of aggregate, decorative coatings, protective coatings, or combinations of the above. See C.I.M. Industries’ Instruction Guide, “Topcoats” (IG-7) for more detailed information.

7.0 GENERAL LIMITATIONS

Applying black CIM under any of the following conditions is likely to result in poor or unsatisfactory performance:

- Use of improper mixing equipment. See C.I.M. Industries’ Instruction Guide “Mixing CIM Premix and Activator” (IG-8).
- Material temperature at the time of application is below 60°F.
- Use of standard application procedures when substrate temperature is below 50°F. See C.I.M. Industries’ Instruction Guide “Applying CIM Coatings in Cold Weather” (IG-11).
- Substrate moisture is present or rain is imminent.
- Substrate temperature is less than 5°F above the dew point.
- Substrate is in a temperature-rising mode or exposed to direct sunlight.
- Other conditions which are obviously unsuitable.

